

## COMMENTARY

## Excellent information is needed for excellent care, but so is good communication

The article by John Ely and his team has important implications for informatics researchers, developers of knowledge resources, health system managers, and physicians.

For researchers in medical informatics and others wishing to understand the information needs of physicians, the data reported by Ely and colleagues confirm consistent findings from studies of how physicians seek information. First, physicians have many questions about how best to care for their patients. Second, most of these questions are never pursued. Third, when physicians do pursue information, they are effective, finding answers about 80% of the time. Fourth, like information seekers in other domains, physicians prefer to get answers from human sources such as colleagues or from readily available printed material, such as drug compendia, clinical manuals, and textbooks.

To further our understanding of how physicians seek information, research should now focus on the following questions: How do we recognize when more information is needed? Improving our understanding of this process could lead to an increased awareness by physicians of their own information needs—the first step in the evidence-based medicine process of ask, access, appraise, and apply.

Why do we so strongly prefer to turn to one another for answers to our questions? The preference for human

sources of answers is well established in virtually every domain that has been examined. Why is this the preferred means of resolving clinical problems? Should our efforts be directed at replacing this interaction or at facilitating and augmenting it?

Until now, it has been possible to use automated processes to identify the topics or concepts in a question, but not to address the specific purpose of the question. Using the novel taxonomy of generic types of questions developed by Ely and associates, developers of resources in medical knowledge should now be able to produce knowledge resources that automatically deliver information that is tailored to the clinical problem at hand.

For health system managers, planners, and policy makers, this article is a reminder that excellent clinical practice requires excellent information support. We know that medical knowledge is dynamic and expanding rapidly. We know that patient management is often complex, requiring that physicians integrate diverse, often conflicting, information with medical knowledge and patient data. We also know, from reports such as this one, that physicians routinely recognize that they need additional information to provide optimal care for their patients. We need health systems that can provide the resources and support necessary to help clinicians identify and meet their information needs.

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For physicians, the reality is that they will not have more time to pursue answers to their clinical questions. Still, the following strategies can be employed to improve the information support in practice.

- Learn the skills of evidence-based medicine, especially of searching the literature and appraising the evidence. The medical literature now contains better evidence, is better indexed, can be searched with better tools, and surprisingly, often contains better answers to primary care questions, especially questions about the benefits of specific treatments. And it is free and available to anyone with an internet connection.
- Surround yourself with the best information. Publishers are paying more attention to the validity of the information, its relevance to clinical practice, and the importance of making it highly accessible and useful to busy practitioners.
- Learn to delegate. Health care is increasingly team-based and multidisciplinary, and information support can be as well. Nursing or office staff, pharmacists, clinical librarians, medical students, and patients and their families can all play a role in finding and reviewing information to support patient care. Physicians need no longer be providers of information but can help patients and others select and interpret the abundance of health information that is now available.
- Integrate information support into the clinical process. Reminder systems, whether by paper or computer, can improve physicians' performance in preventive care and patient monitoring. Prescribing systems, whether in the physician's office or at the pharmacy, can help screen for drug interactions and provide patient education about drug therapy. Simple tools such as preprinted or computerized order sets or instruments to assess patients can improve adherence to current standards and guidelines.
- Expand beyond the limits of episode-based care. It's not practical to seek the best information for every decision. However, quality assurance, peer review, disease management, population-based care, pharmacy and therapeutics committees, and formulary decisions are a few activities to which a more evidence-based approach can be applied, improving the quality of the decisions made in these settings.

Finally, good health care requires effective communication and informed decision making between competent, caring health professionals and their patients. The challenge for all parties is to build information systems that support this process but do not get in the way of it.

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## How medicine has changed

### The healing power of mother's milk

I was due to give a talk entitled "Changes in medicine in 43 years of practice" when I attended the funeral of a patient a few weeks before the presentation. She was a sweet old lady of 96 years who had borne 10 children, and the church was filled to capacity. There were three generations of her family present. An elderly clergyman gave one of the eulogies. He related how as a young boy in the 1920s and 1930s he had been a next door neighbor of Ma Smith. In those days, he said, "We didn't have cars, or fridges, or telephones, we never went to the doctor, we didn't have antibiotics or any of the other wonderful medications they have now, and we didn't have health insurance. We only saw the doctor for a broken bone or if dying. Doctors in those days prescribed mustard poultices or the like and Mother knew all about those. One day, I got a sore eye. Mother said it was 'pink eye' and it needed warm milk applications. Sometimes we did not have the basics, and at the time we had no milk, so she sent me next door to see Ma Smith. I knocked on her door and when she came I told her my problem. She said, 'Look up and hold your eye open child.' I did so and she took out her breast and gave me a squirt."

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## capsule

**Male adolescents may prefer to see female doctors** We often assume that adolescents would prefer to be examined by a doctor of the same gender. But a study in Kansas City suggests the opposite (*Arch Pediatr Adolesc Med* 2000;154:49-53). The authors questioned 67 male adolescents attending a hospital clinic, a response rate of 83%. Of those who expressed a preference, most wished to see a female physician for both general and genital examination. Preference for a woman was greater in African American respondents, almost two thirds of whom has been raised by a single female parent, relative, or guardian.